



Oxidation Resistant Ferritic Stainless Steel

NSSC 405Si

12Cr-2Si-0.15Al

Features

- ① Excellent in oxidation resistance at high temperatures.
- ② Low thermal deformation due to low thermal expansion coefficient.
- ③ Excellent in formability, which facilitates cold forming and welding.

Applications

Combustion tubes for oil-burning stoves, Components of burners for firing furnaces

Characteristics

[Mechanical properties]

		Yield strength 0.2% offset N/mm ²	Tensile strength N/mm ²	Elongation %	Hardness HV
Specification		≥295	≥490	≥15	≤230
Typical values	Hot-rolled sheet	530	660	19	210
	Cold-rolled sheet	345	560	28	180

[Oxidation resistance]

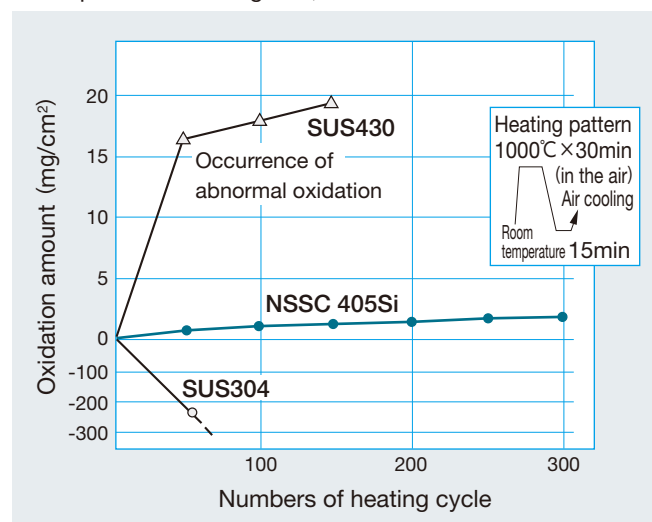
Oxidation test inside an oil-burning stove

Grade	Surface finishes	50h	100h	200h	600h
NSSC 405Si	#400 polished	○	○	○	○
SUS430	2B	×	×	×	×
SUH409	2B	×	×	×	×

Hanged in combustion tube of a small-sized oil-burning stove with reflex mirrors
○: No rust ×: Generation of red rust

Intermittent oxidation test in the air

The figure shows the relationship between oxidation amount and repetitive reheating to 1,000°C for 30 minutes.



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